

JOINT MEETING
FALLS LAKE DAM HYDROELECTRIC PROJECT
FERC PROJECT NO. 13623

Presentations by: Thomas H. Tant, P.E.
Reed Palmer, P.E.
HAZEN AND SAWYER

Kenneth Waldroup
CITY OF RALEIGH

Jason George
Richard Stewart, P.E.
GOMEZ AND SULLIVAN

TRANSCRIPT
OF
MEETING

Raleigh, North Carolina

January 23, 2012 - 9:56 a.m.

Reported by:

Bryan Collins, CVR-M

A T T E N D A N C E

Perry Allen, City of Raleigh

Carol Banaitis, US Army Corps of Engineers

Rich Crowley, NC Sustainable Energy Association

Bruce Duncan, Black & Veatch

John Ellis, US Fish and Wildlife Service

Jason George, Gomez and Sullivan

Robert J. Goldstein, Ph.D., Goldstein & Associates

Chris Goudreau, NC Wildlife Resources Commission

Mitch Hall, US Army Corps of Engineers

Kevin Hart, North Carolina Division of Marine Fisheries

Kent Lackey, P.E., Black & Veatch

Vic Lebsock, Raleigh Parks and Recreation Department

Miriam Makhyoun, NC Sustainable Energy Association

Ariella Monti, Raleigh Public Record

Reed Palmer, Hazen and Sawyer

Haywood Phthisic, Lower Neuse Basin Association

Gerald Pottern, Goldstein & Associates

Julian Prosser, City of Raleigh

Maverick Raber, City of Durham, Stormwater Management

Fritz Rohde, NOAA Fisheries

Katie Shepherd, NC GreenPower

Richard Stewart, Gomez and Sullivan

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A T T E N D A N C E, cont'd

Thomas H. Tant, Hazen and Sawyer

Fred Tarver, North Carolina Division of Water Resources

Doug Timpe, Black & Veatch

Kenneth Waldroup, City of Raleigh

Eugene Weeks, Raleigh City Council

Edward Woodley, US Army Corps of Engineers

Tony Young, US Army Corps of Engineers

Robert Zarzecki, Falls Whitewater Park

1 I, Bryan Collins, being a Court Reporter and Notary
2 Public in and for the state of North Carolina, recorded
3 the Joint Meeting - Falls Lake Dam Hydroelectric Project
4 - FERC Project No. 13623 on January 23, 2012, at 9:56
5 a.m. at the E.M. Johnson Water Plant, 10301 Falls of
6 Neuse Road, Raleigh, North Carolina.

7
8 _____
9 MR. WALDROUP: Folks, we're going to get
10 started here real soon, within the next minute or two.
11 But there's a few folks that are going to have to leave
12 early and there's something that you're going to see
13 again, but I thought it was so neat that I thought we'd
14 run it -- saw it for the first time this morning. It's a
15 high-D short video of the Jordan project, with one set of
16 turbine generators up and running. So this is what it
17 looks like over at Lake Jordan.

18 [PLAYS VIDEO]

19 There's a floating platform that will be
20 removed. That's the white-ish floating platform -- the
21 structure that had been constructed for the project, on
22 the back of the intake valve. So it's really neat. I
23 think that's the generator, turbines down in position --
24 just a really neat project.

25 VOICE: Now, is that similar to the
 configuration that's being considered?

1 MR. WALDROUP: It's one we're exploring.
2 Certainly one we're exploring. But in reality, this is a
3 new project, so we've got to -- this is a project that
4 we've personalized for Falls Lake. I don't want to steal
5 too much thunder from the consultants. They've worked
6 very hard to put together the presentation, so I'll turn
7 that over to them.

8 VOICE: Okay.

9 MR. TANT: Well, first, let me just say
10 thanks to everyone for being here. We're here for the
11 joint meeting for the city of Raleigh's pursuit of the
12 Falls Lake hydroelectric project.

13 A couple of administrative things to just hit
14 on right quick before we start: Exits, there's four
15 exits out of this building; one in the back, three over
16 on the side here, so that if we ever have a need to exit
17 the building there's ample opportunity to do so. If
18 there were to be a fire alarm of any kind, we'll exit the
19 building and convene as a group out on the east side, or
20 the front of the building, out in the parking lot that
21 you came in on. All right?

22 Restrooms, wherever -- out one of the three
23 doors, as well. Men's and ladies', as well as a water
24 fountain.

25 I will start a sign-up sheet. And if you

1 would, please enter your name, the organization you're
2 representing, your e-mail address, and there's a place on
3 here, yes or no, to indicate whether or not you want a
4 copy of the presentation at the end of this or later
5 today, or this week, we will put this presentation, PDF
6 it for those that would like a copy; we'll e-mail it to
7 you. So just indicate yes or no on the sign up sheet,
8 and I'll start that.

9 Just a quick acknowledgment; for the city of
10 Raleigh we've got Counselor Weeks here with us today.

11 MR. WEEKS: Thanks a lot.

12 MR. TANT: You're welcome.

13 Okay. So why are we here? We are here to
14 share with you today and others -- we'll get into more
15 detail, some information about the hydroelectric project
16 the city of Raleigh is considering at Falls Lake. We
17 want to share with you what we know about the project and
18 give you an opportunity to ask questions and certainly
19 explain to you how to be more involved, make comments,
20 and provide feedback to the project as it moves forward.

21 I'm Tom Tant with Hazen and Sawyer and to
22 date, we have been assisting the city of Raleigh with the
23 engineering and licensing efforts on the project. Here,
24 very soon, the city of Raleigh is going to hand over the
25 engineering and licensing task to the firm of Black &

1 Veatch. And so going forward, Black & Veatch will be the
2 primary engineering contact, and then we'll fall back
3 into a support role to Black & Veatch.

4 With us today, for Hazen and Sawyer and our
5 subconsultant, Gomez and Sullivan, we've got myself, Tom
6 Tant, Reed Palmer, we've got Jason George with Gomez and
7 Sullivan, and we've got Rick Stewart with Gomez and
8 Sullivan. We have three representatives from Black &
9 Veatch with us today: Kent Lackey, Doug Timpe and Bruce
10 Duncan. And also I would point out that representing the
11 staff of the city of Raleigh, we've got Perry Allen in
12 the rear of the room and we've got Kenny Waldroup up
13 front, who just spoke to us earlier.

14 One more administrative item: we've got to
15 create and have a transcript for this meeting. As you
16 see, a videographer as well as a reporter, who is going
17 to be creating that for us, and so as we get into the
18 presentation and we get into question and answer periods
19 it will be really important for everyone to stand up, say
20 your name, and that way we can keep up with who's making
21 what comment, or they can keep up with who's making the
22 various comments and it would be a lot easier to make,
23 then, the transcript. So from that respect, it will be a
24 little more formal than some settings you might have been
25 in.

1 After the meeting today, at 1:30, there will
2 be a site visit over at the Falls Lake dam site, for
3 those who would like to go and be a part of that and see
4 that. And then later tonight, there's a public meeting
5 that will be in large part the same information will be
6 presented, but the public meeting is being held at night
7 for those that obviously would have a difficult time
8 being here during the day because of their employment
9 obligations, and so there's another, again, site visit at
10 1:30, and a public meeting tonight at 7:00.

11 So with that, I think we can get started. I
12 would like to -- quickly -- I think it would be helpful
13 if we could just go around the room right quick and just
14 say quickly who you are and who you're representing, and
15 then we'll jump into the presentation. And I've taken
16 care of our folks, so start up here on the front row, if
17 we can?

18 MR. ZARZECKI: I'm Bob Zarzecki. I'm
19 here representing the Falls Whitewater Park Committee. A
20 lot of members of our committee have been members of the
21 stakeholders working with the city on evaluating the
22 potential for Falls Whitewater Park below the dam.

23 MR. GOLDSTEIN: I'm Bob Goldstein. I'm
24 an environmental consultant in Raleigh, and will be
25 assisting Black & Veatch with some of the biological

1 questions that may arise.

2 MR. POTTER: Gerald Potter, and I have
3 worked with Bob Goldstein.

4 MR. ROHDE: Fritz Rohde of NOAA
5 Fisheries Service.

6 MS. MONTI: Ariella Monti, and I'm with
7 the Raleigh Public Record.

8 MR. LEBSOCK: Vic Lebsock with Raleigh
9 Parks and Recreation Department.

10 MR. ELLIS: John Ellis, US Fish and
11 Wildlife Service.

12 MR. PHTHISIC: Haywood Phthisic, Lower
13 Neuse Basin Association.

14 MR. WEEKS: Eugene Weeks, City of
15 Raleigh City Council.

16 MR. LACKEY: Kent Lackey, I'm the
17 Project Manager for Black & Veatch.

18 MR. DUNCAN: Bruce Duncan, Co-manager
19 for Black & Veatch.

20 MR. TIMPE: Doug Timpe, Environmental
21 Manager, Black & Veatch.

22 MR. GOUDREAU: Chris Goudreau, North
23 Carolina Wildlife Resources Commission.

24 MR. RABER: Maverick Raber, City of
25 Durham, Stormwater Services.

1 MR. YOUNG: Tony Young, Corps of
2 Engineers, water management.

3 MR. WOODLEY: Edward Woodley, Corps of
4 Engineers, water management.

5 MR. HALL: Mitch Hall, Corps of
6 Engineers, Geotechnical, Levee Safety and Dam Safety.

7 MS. BANAITIS: Carol Banaitis, Corps of
8 Engineers, Falls Lake.

9 MR. HART: Kenny Hart, North Carolina
10 Division of Marine Fisheries.

11 MR. TARVER: Fred Tarver, North Carolina
12 Division of Water Resources.

13 MS. SHEPHERD: Katie Shepherd with NC
14 GreenPower. We are a statewide nonprofit that supports
15 renewable energy projects in North Carolina, using
16 voluntary donations.

17 MR. ALLEN: I'm Perry Allen with the
18 city of Raleigh.

19 MR. TANT: Very good. Thanks, everyone.
20 All right, with that I'm going to turn it over to Reed,
21 and Reed will get into some details about the project.

22 MR. PALMER: Thanks, Tom.

23 Good morning, again. My name is Reed Palmer
24 and this meeting is being convened as part of the FERC
25 Federal Energy Regulatory Commission licensing process,

1 which is a first public hearing of this potential project
2 that the city of Raleigh is investigating. So our goals
3 for the meeting today are we want to provide a
4 description of the project, insofar as it's been
5 envisioned. Keep in mind it's at a very conceptual stage
6 at this point. We want to explain the regulatory process
7 that we're going through right now, provide an overview
8 of the PAD -- and you'll hear that acronym a lot. That
9 stands for pre-application document. This is a document
10 that was submitted to FERC back in October of 2011, and
11 Jason will be providing an overview of that later on. We
12 want to answer any questions that you might have about
13 the project, and solicit comments at the end and hear
14 what you have to say about it.

15 However, I would like to say, as best as
16 possible, unless you have a quick question, we'd like to
17 hold them until the end so that we can get through this,
18 because it may turn out that we'll answer your questions
19 with future slides, and then take the more substantial
20 questions at the end. But if you've got a quick
21 question, you're not sure what I've got up here, you're
22 not understanding what a component is, go ahead and ask
23 that right away so that doesn't hold you up.

24 Again, today's agenda: we're providing an
25 overview of the project which is going to include a

1 background on Falls Lake and the dam operations, the
2 concept for this hydropower facility, and proposed
3 operations of the facility. Then we'll get into an
4 overview of the traditional licensing process. This is
5 one of two licensing processes that FERC uses. An
6 overview, again, of the pre-application document, a
7 potential schedule, and again, keep in mind we're very
8 early so this will be a very rough schedule, or what it
9 might look like, and then get stakeholder input.

10 A little bit of background on this project.
11 A private corporation, Community Hydro Limited, applied
12 to install, or applied for a permit to investigate
13 installing a hydroelectric facility on Falls Lake back in
14 February of 2009. When the city got wind of it, and with
15 concern because Falls Lake is the city's principal water
16 supply, the City Council authorized the Public Utility
17 department to file a competing application with FERC.
18 And a little bit more than a year later, in November
19 2010, FERC did grant that preliminary permit to the city
20 to conduct studies and prepare a license application for
21 this project. The FERC project number is 13263.

22 So the city, in addition to concerns about
23 its water supply, sees real advantages to this project.
24 It's a clean energy project that would offset, at least
25 as the way we looked at it in the early stages, almost

1 4000 tons, and I think that 3850 is metric tons of carbon
2 dioxide equivalents per year, which fits in very well
3 with the city's sustainability initiative, which includes
4 reducing fossil fuel consumption by 20 percent, and
5 reducing greenhouse gas emissions, and the sustainability
6 issue is approved by the US Mayors' Climate Protection
7 Agreement.

8 So now moving on to the project, here,
9 outlined in red, is the Neuse River basin, which Falls
10 Lake is in the upper portion of the Neuse River basin.
11 Falls Lake itself falls mostly within Wake and Durham
12 counties, but it extends a bit into Granville County.

13 We are zooming in here on the dam itself.
14 This is the dam structure here. The outlet works, which
15 we're going to talk about a bunch today, is a little
16 tower that extends out into the water from the dam, and
17 this is where the Corps of Engineers controls releases
18 down into the Neuse River. The Neuse River is down below
19 this structure called the tailrace. Releases made
20 through the outlet works travel through some tunnels that
21 are buried within the dam. It comes out into the
22 tailrace, and moves on down the Neuse River.

23 Were there to be an especially large flood
24 event during which the Corps of Engineers couldn't pass
25 all the water that it needed to through this outlet

1 structure, there is an uncontrolled spillway at a lower
2 elevation than this dam, so the water would never spill
3 over this damn; it would come through this spillway,
4 here. That has never happened in the life of the
5 project.

6 Here is a picture of the outlet tower, and
7 we're going to be talking a lot about this because one of
8 the ideas envisioned thus far is to put some turbines on
9 this outlet tower.

10 Here's a picture of that tailrace, looking at
11 it from the top of the dam. And as you come out the
12 tailrace, this is the Neuse River below the dam. Looking
13 at that tailrace down from the bottom, at the river
14 level, back up, here's the tunnel coming through the dam,
15 and the dam structure with grass growing on it in the
16 background.

17 So, the congressionally authorized purposes
18 of Falls Lake include flood control, water supply,
19 wildlife enhancement, recreation, and water quality.
20 Nevertheless, within the regulatory structure,
21 hydroelectric power generation is a possibility, and
22 that's what the city of Raleigh is investigating here.

23 This figure that I'm throwing up many of you
24 have probably seen before. It's a cross-section of the
25 profiles of how the Corps of Engineers allocates storage

1 in Falls Lake. And starting at the bottom, we've got
2 this sediment storage, which was allocated because they
3 know that sediment is going to be accumulating in the
4 lake throughout the life of the project, and that volume
5 is allocated because at some point, it may fill up with
6 sediment.

7 Above that, we've got the next two pools that
8 are collectively known as conservation storage. Of that
9 conservation storage, about 42 percent of it is water
10 supply storage. That's owned by the city of Raleigh and
11 it is used to supply the bulk of the drinking water for
12 the city of Raleigh and a number of surrounding
13 communities in Wake County. Beside it in yellow, we've
14 got water quality storage. That is to be used to provide
15 downstream flow, and maintain riparian habitat on the
16 Neuse river. I'm going to be talking some more about
17 that in a minute, on the next slide. And then above
18 that, we've got controlled flood storage. This is the
19 storage volume that's typically kept empty so that the
20 Falls Lake can absorb a large flood event and mitigate
21 the flood impacts on downstream communities.

22 Typically, you'll see here that the Corps of
23 Engineers tries to maintain the lake at 251 1/2 feet
24 above mean sea level.

25 So on the next slide, I'm going to talk more

1 about this water quality pool storage. The Corps of
2 Engineers releases this water from the water quality pool
3 storage with the idea of hitting a flow target, a minimum
4 flow target at a USGS gauge in Clayton, North Carolina,
5 which is in Johnston County. Those flow targets are 184
6 cubic feet per second from November through March, and
7 254 cubic feet per second from April through the end of
8 October.

9 Now, there are times when the intermediate
10 drainage area between Falls Lake and the Clayton gauge,
11 which is, I believe, 250 to 300 square miles, is
12 sufficient to provide all this flow. In that case,
13 there's still a minimum release requirement from Falls
14 Lake, and that minimum release requirement is -- in the
15 winter, it varies based on the lake's elevation. It's
16 between 50 and 65 cubic feet per second. And from April
17 to October, it's 100 cubic feet per second. These
18 releases are what we're talking about generating power
19 from, as well as any releases that are made from the
20 flood storage pool.

21 This is water that's already being released
22 from Falls Lake. I believe there's 47 feet of head
23 differential between lake level when it's full and the
24 river downstream, and it's potential energy that could be
25 used to generate electricity. So there's no change

1 proposed -- I'm going to go through this in another slide
2 again -- to the release regime. So we're just talking
3 about generating electricity with what's already being
4 released from Falls Lake.

5 Now, when we started evaluating the
6 possibility of putting a hydroelectric facility on Falls
7 Lake, we looked at a couple of different concepts. And
8 the one they we're going to spend most of our time
9 talking about today -- and I apologize that this figure
10 is not super-easy to see but here we've got the dam, and
11 this is that uncontrolled spillway that I pointed out in
12 the picture earlier. Installing some turbines right on
13 that outlet structure so that the water flows through the
14 turbines before it's released to the dam and at the
15 tailrace; there was another alternative that we
16 considered. And we call it a downstream powerhouse, and
17 it would be on the downstream side of the dam, and water
18 would come through, would generate electricity before
19 being released into the Neuse River.

20 Preliminary estimates said this was not even
21 close to feasible. It would be far more costly than any
22 power revenues would be able to make up in the future.
23 So we focused on this upstream option, which appears to
24 be marginally feasible at this point. Again, I'm going
25 to go through these points. We're talking about

1 installing hydropower turbines on the outlet tower,
2 generating electricity with the water released from the
3 water quality pool and the flood control pool. There
4 won't be any change in the release. It will generate
5 renewable energy with that water that the Corps of
6 Engineers releases on a daily basis. The power will be
7 sold to a utility -- at least that's the concept that's
8 being investigated right now. And this concept is very
9 similar to what's already been done in the project at
10 Jordan Lake, and it was coming online last week last week
11 and right before we started this, I put the video up of
12 that facility, where they were testing -- the turbines
13 and the generator.

14 Again, I want to emphasize that hydropower
15 generation will be secondary to meeting the city of
16 Raleigh's and surrounding communities' water supply
17 needs, and to already-established Army Corps of Engineers
18 reservoir operations. We just want to generate
19 electricity with what's already going through the dam.
20 And so the hydropower operations would not change the
21 magnitude, timing, or frequency of those water releases
22 from Falls Lake.

23 Now, here's a concept that we are borrowing
24 from the Jordan Lake project, and we envision something
25 similar for Falls Lake. A couple of turbines and draft

1 tubes, where the flow would enter up top, this whole unit
2 would be submerged below the waterline. This shaft would
3 go up to a generator that's above the water surface. The
4 flow would enter, pass through a turbine, and then pass
5 right through the dam structure, as it does today. So
6 this would be put on the front of the dam. And here's
7 the other tower, again, just chewing this picture, we're
8 talking about putting it on the front side of the outlet
9 tower. Here is a schematic of that. Here are these
10 turbines placed in front of the outlet tower. Again,
11 water would pass through this turbine, through the shaft,
12 through the turbine, and then through the dam structure
13 in this manner, out the back of the dam, through the
14 tailrace, and into the Neuse River.

15 In the event that there is a large flood and
16 these shafts and turbines are in the way of passing
17 larger flood flows, they could be lifted up. What they
18 have at Jordan Lake are some hydraulic cylinders where
19 they can lift these towers up, above, so that the flood
20 flows can pass unimpeded through this outlet structure.

21 I want to show some pictures now of Jordan
22 Lake. This is what it looked like before the project.
23 It looks a lot like the outlet tower at Falls Lake. It's
24 somewhat bigger, but the concept is the same. Then as
25 they started to build it, they put this barge out here,

1 and started putting this structure in for the
2 hydroelectric facility. This picture was taken back in
3 May of last year. And this is what it looks like now.
4 They've got this structure appear. The barge is still
5 there. The generator is right here. The outlet shaft
6 and the turbines are all below the water; you can't see
7 them.

8 Zooming in a little bit more, this is a
9 little bit better picture. They've still got the crane
10 out here on the tower, making some final adjustments, but
11 it was running last week.

12 So moving back to Falls Lake again, talking
13 about potential for generating electricity at Falls Lake.
14 This graph shows flow in cubic feet per second on the
15 Y-axis here being released from Falls Lake. And on the
16 bottom, on the X axis here, this is the percent of time
17 that that flow is equaled or exceeded. So this is called
18 the flow duration curve. The right end of the curve you
19 see really low flows, flows, you know, 90 to 100 percent
20 of the time that exceeds this level. And then you get
21 back down here and about 1.6 percent of the time it would
22 exceed 4000 CFS. That's when we mentioned we might have
23 to lift up those turbines out of the way.

24 The generation area we're thinking would be
25 between about 50 to 85 CFS at the low end and 600 CFS at

1 the upper end. Any flows beyond 600 CFS, in this
2 conceptual stage, would just pass through the outlet
3 tower, and would not be contributing to power generation.

4 In the next phase, this is going to be
5 reinvestigated; how can we optimize this, optimize the
6 amount of power that is generated versus the cost that it
7 takes to build such a facility? In this conceptual
8 stage, we estimated if you use this blue-shaded area to
9 generate electricity, that on an annual average basis you
10 would generate about 4600 megawatt-hours per year.

11 So the city, as I mentioned, performed a pre-
12 feasibility evaluation. During that evaluation, we
13 looked at the alternatives to the various ways that you
14 can get the water to the turbines and generators, how
15 much power would be generated -- that was the last slide
16 that I showed, and then estimating the development costs
17 for those various alternatives; and particularly, for the
18 two that I mentioned earlier.

19 Now, the city is performing its estimate as
20 to which design alternative is the most likely to be
21 economically viable. And based on that pre-feasibility
22 analysis, installing the turbines on the front of the
23 outlet tower looked like it was marginally feasible. And
24 as I mentioned before, the downstream alternative was not
25 economically feasible.

1 So I'm going to turn it over now to Jason
2 George. He's going to talk about the regulatory process.

3 MR. GEORGE: Thanks, Reed. Again, my
4 name is Jason George. I'm with Gomez and Sullivan
5 Engineers. I've been working with Hazen and Sawyer and
6 the city to develop the pre-application document, and
7 move them along through the FERC licensing process.

8 Just a little history again on the
9 preliminary permit. That's good through November 2013,
10 and that's really the one hard deadline right now that
11 we're working under, in terms of preparing a license
12 application for this project. So Reed mentioned the
13 feasibility study, things that are going on right now,
14 pre-application document was developed, submitted in
15 October. I hope you all had a chance to review it. And
16 with the pre-application document was the notice of
17 intent, which basically stated the city's intention of
18 moving forward with the project, at this point anyway,
19 that really their intent is to submit a license
20 application for the project.

21 With the PAD, we requested to use the
22 traditional licensing process, which allows us a little
23 more flexibility. There's not as many deadlines up
24 front. And that was approved by FERC. I'm going to go
25 through the schedule quickly here. Just in general,

1 probably the timeline, as I mentioned, the licensing
2 process -- the license application is due in 2013. Then
3 FERC will get into their environmental analysis, and that
4 usually takes them at least a year or two to issue a
5 license. So this is where we are in the process right
6 now. A lot of other things are going to be going on,
7 too, in addition to the FERC licensing process, including
8 consultation with the Corps of Engineers.

9 Near-term, where we are, the joint meeting
10 and site visit, over the next 60 days the agencies and
11 stakeholders are going to have a chance to develop their
12 information requests. We'll be talking about those
13 today. Another deadline really is 60 days from now,
14 study request, the comments are due as a result of this
15 joint meeting. And then again, near-term, continuing the
16 draftee's ability report, looking at all alternatives.
17 And once your study requests are due -- this is our year
18 to do the stakeholder studies, 2012, really, to draft a
19 final license application in 2013.

20 And again, the Corps of Engineers section 408
21 permit planning, planning on starting that early, but it
22 is another separate process, away from the FERC process.

23 Again, [INAUDIBLE] schedule here, November
24 2013 is when the final license application is due.
25 That's a hard deadline because the preliminary permit is

1 only good for three years. So working back a little bit
2 from there, the draft license application is going to be
3 due in early 2013, so we have 2012 to do first stage
4 consultation, which includes consulting with you, doing
5 studies, developing our information for the draft license
6 application.

7 And then just looking up a little bit, you
8 know, to -- FERC is going to take some time to do their
9 initial scoping, and issue a license. I guess looking
10 out even further, thinking about when we might be able to
11 operate, I guess this is kind of a conservative schedule,
12 2018. A lot more has to happen here, in addition to the
13 FERC process, just to point that out.

14 So where are we again? Just another way of
15 looking at it, we are in the stakeholder participation
16 phase, the first stage consultation phase. We've
17 submitted our preliminary permit right now, the pre-
18 application document, which is in your hands, and so
19 again, just another way of looking at it.

20 These are some dates that I wanted to provide
21 to you, just so you're aware of what the next steps are.
22 Again, the 60-day comment period, that's a hard deadline,
23 March 23rd, 60 days from today.

24 Under the TLP, there's not as many formal
25 requirements during the first stage consultation, other

1 than the study plans, consulting with agencies and then
2 again, the November 1 deadline for the final license
3 application.

4 And then under the traditional licensing
5 process, it's really FERC that does the environmental
6 analysis, and that's done after the license application
7 is filed. I don't know if y'all know, the integrated
8 licensing process is FERC's default process, very
9 deadline-driven. Given the time constraints of this
10 project, we've asked and been approved to use the
11 traditional licensing process.

12 So the pre-application document was filed
13 last year in October. Just an overview of that.
14 Provides background information from the existing
15 information available at the time it was developed. We
16 solicited information requests from the agencies to help
17 develop that PAD. Various resources were looked at;
18 geology, soils, water resources, fish and aquatic, we
19 looked at basically everything that was available and
20 presented to us at the time that you gave it.

21 And then preliminarily, we look at these
22 resources. We identified the potential impacts, and came
23 up with a list of issues and potential studies in the
24 PAD, which is what we're going to talk about a little bit
25 more later.

1 So again, issues identified during the PAD
2 development, just to kind of run through these a little
3 bit: under water resources, the effects of project
4 construction on water quality in the Neuse River. Again,
5 these were all framed around the proposal on the table at
6 the time, which was the intake tower development, option
7 one. We didn't really look at any proposed impacts for
8 the powerhouse option because we determined at the time
9 that it was not feasible. So all of the analysis in the
10 PAD was done around option one, the intake tower.

11 Another water resource issue is to prevent
12 interruption of downstream flows during construction,
13 maintenance, operation. And then of course, pretty basic
14 erosion and sediment control plan during construction.

15 Fisheries, in the PAD anyway, we looked at --
16 well, we haven't looked at this yet but we know it's
17 going to be an issue: the effects of operations on fish
18 impingement, entrainment, and turbine mortality. And so
19 you know, we are pretty resigned to develop some kind of
20 trash rack protection to address that issue. Normally,
21 the water will just flow through the dam without any
22 turbines there, so this is kind of a new impact we're
23 addressing under the proposed turbine configuration.

24 Recreational land use. We went to the site.
25 Recreational opportunities aplenty. Just wondering what

1 would be the impacts on this recreation opportunity
2 during construction, and identifying any areas that may
3 not, you know, that might become off-limits during
4 construction or operation.

5 And then an issue came up on aesthetic
6 resources, you know, how loud it is going to be, what
7 it's going to look like, and I think we benefitted really
8 well from looking at Lake Jordan, a similar concept.
9 It's operating now, so we'll get into that in a minute.

10 So once the PAD was submitted, we received
11 some comments, some formal comments from the agencies.
12 And I'm just going to read through these. Influence of
13 water quality under release schedule, basically not
14 proposing to change any of this. It's just a question
15 that came up, something we're going to look through with
16 the report. Pretty basic contiguous species protection
17 consultation process with the Fish and Wildlife Service
18 and the NOAA fisheries. Noise, I mentioned. And
19 downstream aquatic habitat, fish passage, and then
20 cultural and tribal resources.

21 So in the PAD, you know, we came up with a
22 list of issues and presented some proposed stuff out of
23 where we're gonna go with it, from here. Again, no
24 changes in the release schedule. So all of our core
25 studies in the PAD relate to the impacts with the

1 addition of hydropower operations or construction.

2 So, kind of putting our heads together here
3 and looking forward, we came up with a list of one-stop
4 environmental studies that I think would be prudent.

5 Water resources, we will conduct a water quality impact
6 analysis during construction and operation. There's a
7 good bit of water quality in the reservoir itself, but
8 not so much downstream at this point. And again, I
9 mentioned the noise control plan. And again, in-stream
10 and flow and maintenance measures as appropriate during
11 construction. Temporary flow interruptions may occur
12 during construction, a little early to tell if that's
13 going to be part of it or not.

14 And impact analysis for the division of
15 aquatic resources. Again, I mentioned trash rack. And
16 as we move forward in the license application, will look
17 at potential fish protection measures. Recreation impact
18 analysis during construction and aesthetic resources
19 impact analysis.

20 Engineering review studies, I'm just going to
21 read these. This isn't really my area of expertise but
22 I'm just going to go through these and talk about them
23 during the discussion period. Number one is geotechnical
24 conditions at the intake and outlet pipes and energy
25 dissipater. Number two is structural conditions of

1 intake-outlet facilities. Three is the existing
2 mechanical systems at the dam. Four is hydraulic flows
3 at intake and outlet, and energy dissipater. Five is
4 access to the intake tower. Six is operation and
5 maintenance requirements for the tower.

6 So again, we're in the first stage
7 consultation process, which involves this joint meeting
8 and soliciting written comments from you. There's a
9 specific requirement in the Federal regulations that
10 deals with this commenting process, and we've got a
11 handout up here that outlines exactly what should be in
12 your additional information requests, or study requests.
13 And those are due in 60 days. They need to be provided
14 to the city of Raleigh, not FERC. This is more so for
15 the public, too, so they understand that they have an
16 opportunity to comment.

17 And this is one of our handouts, just so that
18 you're aware, that the 60 days, any comments or
19 additional information --

20 MR. PALMER: If I may just interject and
21 show everybody. There's a handout that FERC provides.
22 It has a lot of information on hydroelectric projects,
23 and how to get involved. And then this slide that Jason
24 has up right now, we've got this handout as well, that
25 applies specifically to the TLP, or traditional licensing

1 process.

2 MR. GEORGE: Yeah, just quickly, you
3 know, it helps everyone involved if you can really
4 identify what you're asking for, why you're asking for
5 it, what are the resources it involves, and the resource
6 agency, why are you asking for it, and just touch on the
7 methodology, why that would be important methodology to
8 look at the resource.

9 Again, please submit your comments, and we'll
10 get into this more as we discuss this. The comments,
11 written comments, should be provided to the city, with a
12 copy to Black & Veatch. And I guess you know, we can
13 hand this out, or it should be on the city's website.

14 MR. TANT: Beside the brochures up here,
15 there are several cards for Kent Lackey, as well, that
16 you're welcome to take.

17 MR. GEORGE: This slide was more for the
18 public, just to provide that information on how to submit
19 public comments. What I went through previously was more
20 for agency study requests. But again, just some
21 information. If you're familiar with the FERC website
22 you can sign up, project 13623. You'll get an e-mail
23 every time something new is posted to the docket. And
24 again, if you don't have all the information that was
25 filed to date, you can go back and it should all be

1 there. So it's, you know, the PAD and notice, and all
2 that.

3 That's really my part of the presentation. I
4 guess if you have any questions on the FERC process I can
5 talk about that. Otherwise, we're going to open it up
6 for comments, questions, any other information you'd
7 like. Okay, go ahead?

8 MR. PALMER: Could you please state your
9 name before you ask your question, just so we know who's
10 talking?

11 MR. GOUDREAU: Chris Goudreau. Jason
12 had mentioned about public comments but FERC regulations
13 require that even if a non-agency person submits a study
14 request, they still have to follow that outline of
15 answering those questions, you know, that FERC has got
16 in the regulations. So comments are one thing but study
17 requests still require that --

18 MR. PALMER: Yeah, thank you. You're
19 right.

20 MR. WALDROUP: This might be a good time
21 to talk about the study requests and the project in
22 general, at least from an applicant's point of view.

23 This is Kenny Waldroup, with the city of
24 Raleigh. As was noted in the presentation, in 2009 when
25 we received notice that a third party wanted to become

1 involved in Falls Lake via hydropower, we were concerned
2 because that's our primary water supply. And we first
3 approached this project and its application as a means to
4 gain time to study the project. Quite honestly, we had
5 significant concerns that a third-party would take
6 advantage of the Corps's current discretionary use
7 authority. And let me explain that a little bit.

8 The dam is operated under an operational
9 plan. But the Corps has demonstrated a small amount of
10 discretionary authority around certain key times of the
11 year, toward the end of the wet season, March and April.
12 They've exercised that authority at the request of the
13 city, and at the request of certain resources and
14 permitting agencies such as DWQ and Wildlife Resources
15 Commission and others to retain slightly more amount of
16 water in the lake than is absolutely required. And we
17 think that is a very good thing, as the applicant. We
18 were very concerned that a private entity whose sole
19 desire for a project was to generate as much electricity
20 as possible would be at the table, encouraging the Corps
21 to use their discretionary authority to release exactly
22 Gi-per [PH] as quickly as possible, to generate as much
23 electricity as possible.

24 So we approached this project initially as a
25 means to ensure the protection of reliable yield in the

1 lake. Now, that was two years ago. As we studied this
2 project we realized that it could be very viable, and
3 could be very important to the city's future. It is
4 quite literally a means to provide renewable electrical
5 energy to the grid at a time when energy prices are
6 projected to only rise, and rise significantly, based on
7 the work found in our preliminary feasibility study. So
8 it is our fiduciary responsibility as an applicant to
9 minimize our long-term electrical costs. This project
10 really looks attractive from that point of view, in the
11 right set of circumstances.

12 So I share all of that to share our concern
13 that if there are a number of assumptions that go along
14 with the project -- for example, if there's a desire by
15 any resource or permitting agencies to use this project
16 as a means to acquire fish passage, that would make the
17 project un-viable and the city would simply not be able
18 to pursue it. It is an environmentally sound project, as
19 we presented it. We think it has a minimal impact if we
20 build it right. We realize that there were some problems
21 with the construction process over at Jordan that we can
22 overcome.

23 But the reality is, it is not your
24 traditional water and wastewater project, and we have to
25 recommend to our city council a prioritization of

1 projects, and this one is marginal. So if there are a
2 number of studies that are studies that don't necessarily
3 facilitate the project, but they are there because it's
4 information that we want to gather, that may also be
5 detrimental to the project. I just want to be honest
6 with you. It is a very marginal project. So keep that
7 in mind when deciding what you think is absolutely
8 necessary to make an informed, responsible decision.

9 MR. PALMER: Okay, any questions? Any
10 comments?

11 MR. RABER: Maverick Raber, City of
12 Durham. Will the intake for the proposed hydroelectric
13 plant be the same elevation as the current intake
14 elevation?

15 MR. PALMER: Will the intake in the lake
16 be the same elevation?

17 MR. RABER: Yes.

18 MR. PALMER: That's a detail that hasn't
19 been worked out yet. And the folks with Black & Veatch
20 that are sitting in the room in front of you might be
21 better to able to answer that question than I would.

22 MR. WALDROUP: This is Kenny Waldroup
23 again with the city of Raleigh. I would like to take a
24 stab from the point of view of the applicant, not
25 prejudging the work that the engineer has to do to

1 responsibly evaluate this for the FERC permitting. But
2 again, it's the applicant's desire not to see any changes
3 in lake operation. In fact, we would actually like to
4 see a refinement in how the lake is operated, giving the
5 Corps the ability to fine-tune and control the water
6 releases better than they have today.

7 We are not, as staff, recommending any of the
8 project's alternatives that look at building something
9 downstream. We're not interested in interfering with or
10 becoming a party to the possible Whitewater Park.
11 Certainly, we think that the costs make that infeasible
12 and the environmental impact is certainly higher. So
13 from the applicant's point of view, we made it clear to
14 our engineering team that we really want to narrow the
15 range here and focus on what's viable. We do want to
16 encourage the Corps to continue to use its discretionary
17 authority, which is not large but it's still been
18 helpful, to maintain water in Falls Lake as much as
19 responsibly possible, under current environmental
20 conditions.

21 So for example, we would not be asking for
22 more releases. We would not be asking for the lake to be
23 lower than normal.

24 MR. RABER: Right. I guess my concern
25 would be not necessarily a change in elevation but if

1 there's a change in where the intake is, how that could
2 affect what the thermodynamics of the lake itself behind
3 the dam, in the waters behind the dam.

4 MR. WALDROUP: Yes, I would suspect that
5 it would be economically unviable to do significant
6 changes, and probably not supported by the resource
7 agencies. But we've just got to rollout through the
8 technical process, and see what the alternatives speak
9 to. As a representative of the applicant, I envision
10 that there would be no significant changes, no minor
11 changes, only those that might improve the fine control
12 of the intake.

13 For example, on some of the low flow targets,
14 the Corps uses what I call piggybacks gates, some of the
15 smaller water quality gates. And they actually have a
16 pretty large discretionary band. It's very difficult for
17 the Corps to hit an exact target. We can imagine this
18 project providing the Corps with an opportunity to
19 control that, and that would ultimately mean more water
20 in the lake for a longer period of time, if they're
21 trying to hit an exact mark. And that's a good thing in
22 our eyes.

23 MR. YOUNG: Tony Young over at the
24 Corps, and I don't know if this may answer part of your
25 question. The project at Jordan hasn't dictated that we

1 go to, say, a bottom release as opposed to a service
2 release during certain times of the year. We maintain
3 all of the flexibility as far as where we would be able
4 to do it with -- draw water from this project with the
5 Jordan project.

6 MR. PALMER: Chris?

7 MR. GOUDREAU: Yeah, Chris Goudreau
8 again, just to follow-up on that, my comment letter from
9 October addressed some of those similar concerns. For
10 the list of issues to include an understanding of how the
11 project might change, if at all, water quality,
12 particularly downstream, by any changes in the intake
13 elevation that might be affected by how the operation of
14 the towers that are added on to the face, and how those
15 change, and those different elevations might affect
16 downstream water quality in terms of temperature
17 [INAUDIBLE] and so on. Might actually make it better,
18 but I think that's an important bit of information that
19 should be studied.

20 MR. LACKEY: Yeah, Kent Lackey. Just so
21 we're clear, we've got to say this quite clearly: our
22 goal here is to follow along with the licensing process
23 but from an engineering standpoint, take what's been
24 done, has been done quite well, and refine it. But
25 looking at the detailed engineering side of it, so that

1 we have a firm grasp on how it would be implemented in
2 the existing tower, what the cost would be, obviously, so
3 that we can follow through the viability. But then
4 because of the engineering refinement and now, knowing
5 the technical details of it, we'll be taking into
6 consideration identifying if there might be issues, quite
7 frankly, trying to make sure that there aren't issues
8 because we are trying to implement the project without
9 changes to the operation, to the effects as well, so
10 that's kind of our goal as we start driving through the
11 project.

12 MR. DUNCAN: And this is Bruce Duncan
13 from Black & Veatch. From a technical perspective, we're
14 not going to change the basic operation. We're getting
15 into basically a detailed study of the nature of the gate
16 sizing, location. Certainly, there is a capability of
17 selective level releases, so it's just a matter of
18 balancing the water quality requirements for this
19 configuration.

20 MR. HALL: My name is Mitch Hall with
21 the Corps of Engineers, Wilmington, geotechnical section
22 and dam safety. First question is how much coordination
23 has there been with the Corps, whether it be at the
24 headquarters level in DC or regional level in Atlanta, or
25 maybe even Wilmington district, on requirements for the

1 408 analysis modifications of the Federally-built
2 structure? How much coordination has there been to date?

3 MR. WALDROUP: This is Kenny Waldroup
4 again with the city of Raleigh. I can say that part of
5 the team that we're pulling together includes Allen Piner
6 [PH] as a subconsultant, and we certainly want to take
7 advantage of his experience in moving through the 408
8 process as it occurred for Jordan, to learn from, refine,
9 and improve. But to answer your specific question, we
10 have just simply provided verbal notices of our intent to
11 proceed. We recognize that the 408 process is an
12 integral component of the permitting process we'll have
13 to go through.

14 MR. HALL: My follow-on comment, if I
15 can, would be, understanding the difference between
16 Jordan and Falls, concerning the dam safety action
17 classification rating, the rating at the Jordan is four
18 out of a one through five. And in simple terms, one
19 being the worst with regard to potential for failure, or
20 consequences downstream; five being the best conditions.
21 And nationwide, there's a few ones and twos out there
22 that are of national concern and require a lot of
23 attention from the Corps and local entities to repair
24 these issues. Jordan is, again, a four and Falls is a
25 three.

1 One of the major drivers for the dam safety
2 action classification for Falls being a three is the
3 consequences downstream if we were to have a failure load
4 that, because of the population downstream, that is one
5 of the major drivers. So there is concern that at what
6 level can we do a 408 evaluation when there are those
7 consequences downstream that are driving that DSAT three
8 rating?

9 And DSAT threes, twos, and ones have a higher
10 level of scrutiny when it comes to the 408 process. In
11 fact, if there is something that's being modified for a
12 federal structure that impacts that rating in some way,
13 or impacts the potential failure mode, and it's driving
14 that DSAT rating, then in some occasions you're not even
15 allowed to do a 408 at all, and the project pretty much
16 stops. So we're pretty much kind of on the borderline
17 here at DSAT three. And one of the things that I think
18 we're going to have to address in the near term is to
19 understand is there a way to address the consequences
20 downstream, whether it be a flood warning system, or
21 something to that effect. And so internally in the
22 Corps, we're trying to understand, you know, what are all
23 the pieces driving that DSAT three rating if the 408
24 process is going to be allowed, for this particular
25 project.

1 MR. WALDROUP: This is Kenny Waldroup
2 again with the city of Raleigh. We appreciate those
3 comments. That's the type of feedback we wanted. We
4 recognize the DSAT rating of the dam will be one of those
5 critical-path items for the project, a go/no-go decision
6 component to the project. And we're certainly looking
7 for feedback on how this project could proceed. I think
8 at the end of the day, the Corps is going to have to
9 assure itself that the project, as proposed, adds no
10 appreciable risk to the dam. So a project that's
11 designed and operated, and you have the confidence in
12 that design and in that operational plan to provide no
13 effective change.

14 We've not considered some of the mitigative
15 actions that you just mentioned. A warning system,
16 certainly that would go into the mix also to decide
17 whether the project is a go/no-go, depending on how
18 elaborate that is. This is the conversation that we
19 want, and we appreciate that.

20 MR. HALL: And so I guess my final
21 comment or question is, in your -- I'm glad you put the
22 timeline up there. What is that you say -- meeting of
23 the section 408 permit planning, is that -- I see it's
24 going through February 2012, and I envision it taking a
25 little bit longer than that. But what does that

1 particular task entail?

2 MR. LACKEY: This is Kent Lackey again.
3 One of the first things we're going to want to do, this
4 joint meeting is really the transition, where Black &
5 Veatch will start taking the lead and start --
6 engineering feasibility studies, as well. One of the
7 first things we wanted to do is have our team get
8 together with the Corps, understand the issues, and then
9 roll that into what we're going to be doing from the
10 feasibility standpoint. So initial consultation is
11 really kind of that guided exchange. We're going through
12 the background that we need to right now. We'd love to
13 sit down and look at the timing on when we could have
14 that consultation, just to start shaking out some of
15 this, so we can make sure that we address those in an
16 appropriate manner as we follow through on the project.

17 MR. HALL: So that's pretty much --
18 we're looking for a meeting with Raleigh, Black & Veatch,
19 the Corps, to kind of hash out those details in the near
20 term.

21 MR. LACKEY: Yes, very near term. Quite
22 frankly, we'd love to even schedule it, you know, today,
23 pick a date and start refining that. On our team, as
24 Kenny mentioned, Alan Piner will be there to assist us as
25 well. We also have a dam safety specialist within our

1 organization that's on our team as well, that does this
2 day in and day out, who will be leading those efforts.
3 We're going to bring him to that meeting, as well.

4 MR. HALL: Okay, thank you.

5 MR. WALDROUP: This is Kenny Waldroup
6 again with the city of Raleigh. As much as possible, we
7 would like to ensure uniformal [PH] response to
8 ourselves, or to a future applicant, in the event we
9 withdraw because we decide the project is infeasible. So
10 we want to ensure that we develop information that
11 indicates that the Corps will respond that this -- that
12 we cannot proceed, or a future applicant cannot proceed
13 by X, Y and Z.

14 Because what we don't want to do is abandon
15 the project as infeasible and then in two years, have
16 another applicant come along and receive a different
17 answer and build the project. That would not be a good
18 outcome. We want to apply that logic to all of the
19 resource and permitting items, so we can walk away -- if
20 this project doesn't move forward because it's infeasible
21 because of certain conditions, we want to walk away
22 understanding that that is the answer, and we've had some
23 reassurance that the same answer would be given to a
24 future applicant, and the water supply, as we see it,
25 reliable yield would have a minimal chance of being

1 impacted by somebody.

2 MR. PALMER: Mitch, I just want to add
3 to your comment. You know, you asked about this slide
4 here and envisioning these meetings needing to go
5 further. We really just put this up sometime in this
6 time frame we wanted to have that first meeting.

7 MR. HALL: Initial? Okay.

8 MR. PALMER: But then here on this
9 schedule you can see, I mean, we're going well out into
10 Q3 of this year with the consultation permit planning and
11 review. So that last one was -- we just wanted to have
12 the first meeting, as Kent said, as soon as possible.
13 But then, it will continue further. Fritz?

14 MR. ROHDE: Fritz Rohde, NOAA Fisheries
15 service. After reading the PAD, I contacted -- several
16 of us contacted Wildlife Resources Commission biologists
17 to see if they had sampled below Falls Lake for the
18 presence of eels, and eels are present. They're getting
19 past Milburnie Dam at this point. And there's also
20 hopefully a strong likelihood that Milburnie Dam will be
21 taken out in the near future, which will allow even open
22 access to the next dam. Based on that presence of eels,
23 we are strongly considering prescribing fish passage for
24 eels, at this project.

25 MR. WALDROUP: Kenny Waldroup again.

1 That's okay. That would probably end the project. And
2 as long as you ensure that that prescription would be for
3 every other applicant, this project is so marginal,
4 unless there's significant changes in federal energy
5 policy to provide incentives that don't exist to private
6 entities, it would be very unlikely that we would see a
7 competitor for our interest come along and build a
8 project, and build fish passage. It's just the reality.
9 So I think in the totality of your decision, I would
10 strongly encourage you to consider the global
11 environmental benefit of the project. And I would
12 propose, I would take the position that the generation of
13 renewable power, or not, is a net benefit to the
14 environment. But I understand your position, respect it
15 if it's the ultimate position that the agency takes.

16 VOICE: Just on a bookkeeping note, will
17 you send out a list of attendees and their contact
18 information, along with the PDF of the presentation? Is
19 that a possibility?

20 MR. WALDROUP: Sure. Yes, we can do
21 that.

22 MR. ZARZECKI: This is Bob Zarzecki.
23 I'm representing the Falls Whitewater Park Committee, and
24 as a former member of the stakeholder process -- city
25 working on the Falls Whitewater Park potential -- I have

1 a couple questions. One, on the flow duration chart you
2 presented, what was the timeline used for that chart?

3 MR. PALMER: That's a good question.
4 That flow duration chart -- let me get back to it, was
5 produced with the Oasis Neuse River basin model. So it
6 extended beyond the time frame that the dam has even been
7 there. We've got hydrologic records that date back to
8 1929 in the model, and I think possibly the flat river
9 gauge at the [INAUDIBLE] even goes back to 1926. But the
10 Neuse River basin model has a flow record and it goes
11 from 1929 up till basically the present. And I think I
12 ran this 1929 through 2010. And so that's where it came
13 from.

14 And I actually have, at the bottom of the
15 presentation, if you want to see the difference of the
16 flow curve from since the dam has been there, since
17 roughly the early '80s. And this part gets cut off. The
18 way that the Oasis model is programmed to handle flood
19 releases was based on some information that Terry Brown
20 [PH] gave us before he retired. And that was put into
21 the model by a company called Hydrologics, that developed
22 the model for the state. So that's why you see this flat
23 plateau here. But I can put up the actual one in a
24 minute.

25 And of course the hydrology since 1985 has

1 been different than the hydrology since 1929. It's been
2 drier. So I think what you'll see is it's very similar
3 from here on down. I don't have the two superimposed on
4 each other but a lot of these high flows are cut out. It
5 was a wetter period from 1929 through the mid-80s that it
6 has been since then. So because that probably piques
7 some folks' curiosity, I want to get down and find that
8 slide.

9 Here is the actual flow duration curve based
10 on -- there's a USGS gauge that's literally a couple
11 hundred feet downstream from the dam, and that's what it
12 looks like. So the flows at the high end are different.
13 However, the oasis model is about right that it's about
14 1.6, 1.8 percent of the time that flow is over 4000 CFS.
15 So it's pretty close, but that plateau doesn't exist
16 because the way the Corps operates it, there are a whole
17 lot of other factors that they considered then we were
18 able to program into our computer model.

19 MR. ZARZECKI: And another question I
20 had was would there be additional infrastructure as far
21 as power lines, substations, the like, that would need to
22 be connected to this generator?

23 MR. PALMER: Absolutely. I'm not sure
24 if anybody wants to add detail to it but in the
25 preliminary process we looked at a transformer that was

1 only 700 feet away, but we haven't talked to the power
2 companies to see if it could handle it. Would you like
3 me to show that, where that is?

4 MR. GEORGE: Please do.

5 MR. WALDROUP: Kenny Waldroup, city of
6 Raleigh. Obviously, another one of those go/no-go
7 decision processes for the applicant is the impact on our
8 citizens. So we're going to carefully study the visual
9 aspect, the aesthetic aspect. We're hoping -- we don't
10 know, but we're hoping that the infrastructure in place
11 right now would allow for buried power, with a
12 transformer on the dam, with buried power out to a grid
13 connection not that far away. That's what we hope will
14 be the case. We've got to reach out to Progress Energy
15 and just get the honest answer, but we haven't reached
16 that level.

17 Also, we are very aware that the question of
18 noise from our neighbors has been asked. That's going to
19 be part of the design project. Certainly, we want to go
20 over to Jordan. We want to take some readings to
21 understand what the noise level is. I was very
22 encouraged that Reed went there this weekend and you can
23 hear the noise from an operating generator, and he was a
24 little bit surprised that the sound of the birds
25 sometimes drowned that out. So that was encouraging.

1 But we're certainly going to look at that, and that will
2 be a consideration. Because we've got to have public
3 support for this project. It's marginal, and if our own
4 citizens object to it for various reasons, it will be a
5 very difficult decision for the Council to move forward.

6 VOICE: I guess I have one last
7 question. If the city withdraws their application and
8 decides not to proceed, or is denied, do they have the
9 ability or right to reapply at a later date?

10 MR. PALMER: Jason?

11 MR. GEORGE: I believe they do. I'm not
12 sure what the timelines for that would be but I think at
13 Jordan they were almost forced to do that, because they
14 had taken longer to make up their minds, but they
15 eventually got the same permit and license. But it's not
16 very common for them to do that, but I don't think
17 there's anything in regulations, as far as I know.

18 MR. WALDROUP: let's elaborate on that
19 little bit. Say some other entity comes along to make an
20 application. There's only a short period of time, to my
21 understanding, where we could ask for a competing
22 application. And if we didn't take that step, then the
23 third party would have the first right to eventually
24 build the project, if it's viable. That's why this
25 question of nailing down the conditions that would come

1 from various resource and permitting agencies is so
2 important for us. We wouldn't want to have a question on
3 dam safety, mitigation, or fish passage, or dissolved
4 oxygen control be answered one way for the city and then
5 a couple years later be answered another way for a
6 private entity. I think in this case, the city's
7 interest is tied pretty intimately with the resource and
8 permitting agencies, for the most part. We want to
9 ensure water behind the dam for low flow conditions, and
10 we've worked successfully together to work with the Corps
11 to make that happen. A third-party power generator does
12 not have that interest.

13 MR. LEBSOCK: Vic Lebsock with the city
14 of Raleigh, Parks and Recreation. One other concern I
15 have, too, is you've talked about the outlet having the
16 same frequency, the same level -- and three factors,
17 anyway, in the outlet. But does that evaluation include
18 turbidity or the velocity of the water that's released?

19 MR. PALMER: I'm not sure that I can
20 answer that question. I do know that energy dissipation
21 study is something that the Black & Veatch folks have
22 proposed to do. Whether that may be able to answer your
23 question regarding turbidity, I'm not sure.

24 MR. TANT: I think that turbidity
25 question goes back to the general water quality concept,

1 which is there's a number of water quality components
2 that will have to be addressed in the more detailed
3 evaluation, to include turbidity --

4 MR. LEBSOCK: sure.

5 MR. TANT: -- depending on how, you know,
6 they see the project coming together, where they see
7 gates, how they see them operating. So I think that is
8 just part of it.

9 MR. TIMPE: To add to that -- this is
10 Doug Timpe with Black & Veatch. I want to add that one
11 of the studies that we plan on addressing is an erosion
12 control plan. Of course that may not necessarily address
13 entirely what you're talking about, but we are addressing
14 erosion and turbidity, through that. So that will be
15 addressed at least from a desktop level.

16 MR. LACKEY: Just as -- for Jordan Lake,
17 I believe they're required to do a one-year water quality
18 study. Maybe somebody from the agencies can comment on
19 that. I don't know if that's occurred yet. That may
20 help answer some preliminary questions, because the
21 configuration is similar.

22 And then in terms of your other question
23 about getting a copy of the information here, the
24 transcripts of this meeting and the night meeting are
25 going to be posted on the FERC website once they are

1 complete. So you can download it from there, as well.
2 But we certainly have your e-mail as well, if you want a
3 copy. We would like to package everything together with
4 the presentation, and transcripts of the meetings.

5 Mr. ELLIS: John Ellis, US Fish and
6 Wildlife Service. I've heard some really good things
7 here today, such as trying to get a better handle on
8 releases, and fine-tune those. Sounds like a great idea.
9 I like that idea you have about burying the power lines
10 to reduce -- that, statically, would probably be better,
11 but the other thing is that would reduce interaction,
12 potentially, with eagles and other birds.

13 You had mentioned that in-stream flow type
14 mechanism would be put in place for construction and
15 maintenance, to make sure flow continues downstream.
16 That will be a large interest to us, as well as your
17 downstream, other downstream users, the city itself for
18 being able to dilute the wastewater discharge. Good to
19 hear some of these things are in place.

20 I guess a question would be do you have an
21 exact date that you want these comments by? When the day
22 from the 60 days would be?

23 MR. TANT:.. March 23.

24 MR. ELLIS: All right.

25 MR. WALDROUP: This is Kenny Waldroup

1 with the city. We would ask that if you have some
2 significant concerns, that you meet with us before that
3 60 days. So if there - we're going to try to set up a
4 meeting with the Corps. If there is a strong concern in
5 Atlanta that we cannot proceed because of the dam's
6 safety rating, we'd like to meet, verify that we've
7 discussed all the possibilities, and that everybody up
8 and down the chain is very cognizant of the project and
9 the impacts. That's fine.

10 Likewise, we have the question of fish
11 passage, for any of the agencies, that we have an
12 opportunity to meet with you and talk about the project
13 and make sure that up and down the chain, everybody's
14 cognizant of the decision. We're good with an agency
15 making a recommendation against the project, if the
16 agency is doing that for the betterment of the resource
17 the agency is protecting. That's okay. We just want to
18 make sure, though, that that decision is made at a high
19 enough level that somebody doesn't come along in two or
20 three years and you know, reverse the decision. That is
21 problematic.

22 MR. ZARZECKI: This is Bob Zarzecki
23 again. One request I would make at this point in time.
24 You mentioned no change to the flow regime, current flow
25 regime, but then you also mentioned the possibility that

1 we could have a more modern gate system that could refine
2 your [INAUDIBLE] goals, and that potentially resulting in
3 more water in the lake for a longer period of time. If
4 we can see a pre-new gate and a post-new gate scenario on
5 that and to see what the difference would be, that would
6 be helpful.

7 MR. WALDROUP: I agree. That would be
8 very helpful. And I think we're talking about the
9 difference between trying to get to 60 CCF and 80 CCF,
10 and I know that there's the piggy-back gates, from my
11 memory, it's very difficult to fine-tune below 100 CCF,
12 is what I recall. I defer to the operational staff to
13 elaborate. But our intention would be to have a project
14 that allows us to have a finer control than they
15 currently have in the facility.

16 MR. ZARZECKI: Sounds like that would be
17 more in the 100 CFS, or the lower [INAUDIBLE] target
18 range.

19 MR. PALMER: Yes, in the back of the
20 room?

21 MR. TARVER: Fred Tarver with the
22 Division of Resources. Kenny, one question I have is I
23 know some of the alternatives that have been put forth
24 with the Little River have [INAUDIBLE] been
25 reapportionment of storage and [INAUDIBLE] position of

1 intakes -- Have you factored in these projected
2 alternatives for Little River, in terms of production
3 [INAUDIBLE]?

4 MR. WALDROUP: Kenny Waldroup with the
5 City of Raleigh. We've been wanting to keep the projects
6 separate because we've been asked to study alternatives
7 that include taking more water from Falls Lake, and it is
8 our applicant responsibility to go through those studies
9 and review those appropriately. As the applicant,
10 though, at least I, from a staff person's perspective,
11 think that's going to be a very difficult level to
12 acquire because there's a number of stakeholders upstream
13 who are concerned that - I mean, I went to go visit the
14 Upper Neuse Basin River Association last week because a
15 number of the municipalities and counties upstream were
16 concerned about this project changing the operation of
17 the lake, and I was very happy to deliver the message
18 that this project's intention is not to change anything.
19 So I also gave them fair warning that we, as an applicant
20 for another project, have to come back and discuss the
21 opposite. And they'll have an opportunity at that time
22 to weigh in on that project. But we were trying to
23 separate these issues as much as possible.

24 And I'd lay that out for the other resource
25 and permitting agencies. It's entirely possible the

1 things that you might desire today are not viable under
2 this small project, but become more viable if the city,
3 because it is the lowest reasonable impact, has to come
4 back to the Corps and to others, and ask for more water
5 allocation for Falls Lake, or ask for an intake in the
6 Neuse River.

7 Which there are three alternatives to the
8 Little River reservoir. That's a \$263,000,000 project.
9 It certainly has a lot more viability to address
10 mitigation issues than a \$7-\$10,000,000 hydro project.

11 And then I'd like to end of my comments by
12 saying that this project, from a staff point of view, and
13 public utilities, is a very unique project. It's one of
14 those projects where we believe we can provide a net
15 positive environmental benefits, which is not something
16 we can always lay claim to for the rest of our business
17 and, at the same time, ensure our fiduciary
18 responsibility to our Councilpersons by finding a way to
19 minimize increase of power in the future, to impact that
20 positively for us. That's how we're approaching this
21 project.

22 MR. PALMER: And Fred, if I can add to
23 Kenny's response, you know, none of those options involve
24 changing in minimum releases to Falls Lake, so that would
25 always -- that would be the same as it's envisioned

1 across this project as well as any of the alternatives
2 under the Little River reservoir evaluations. And as far
3 as this evaluation, our 4600 megawatt hours per year,
4 that was done I think under a future water use scenario,
5 maxing out the use of Falls Lake as it is now. So it's
6 actually somewhat less energy than they can generate if
7 it were online right now. But the difference isn't that
8 great. If I recall, the two flow duration curves are
9 very similar under the current scenario and under this
10 future scenario.

11 MS. MAKHYOUN: What would be the
12 nameplate capacity of the turbines that are being
13 proposed? And it looked like there might be more than
14 one. And what would be the efficiency that would be
15 proposed?

16 MR. PALMER: Rick, can you answer that?
17 I believe it was 1.7 megawatts, was the total generation
18 capacity, and maybe Rick can comment a little bit further
19 on the efficiency.

20 MR. TANT: Real quick, your name?

21 MS. MAKHYOUN: I'm sorry, I'm Miriam
22 Makhyoun from the North Carolina Sustainable Energy
23 Association.

24 MR. TANT: Thank you.

25 MR. STEWART: I'm Rick Stewart with

1 Gomez and Sullivan. Yeah, the 1.7 megawatts is correct,
2 and the efficiency is roughly around 95 percent.

3 MS. MAKHYOUN: Thank you. Two turbines?

4 MR. STEWART: Yes.

5 MS. MAKHYOUN: Thank you.

6 MR. DUNCAN: This is Bruce Duncan with
7 Black & Veatch. One of the alternatives we will be
8 reviewing after we review the previous study is a
9 different combination, maybe a second, smaller turbine to
10 maximize the benefit of the minimum flows, so that those
11 numbers are for what's currently proposed.

12 MS. MAKHYOUN: Okay.

13 MR. TANT: Other comments? Well,
14 thanks. Tom Tant again, we've got brochures up front.
15 We've got copies of the slides, that's got some
16 information on them about what to include in your
17 request, and we also have some cards up here for Kent
18 Lackey with Black & Veatch. And for those that have an
19 interest in seeing the site, live and in person, we'll
20 convene over at the visitors center this afternoon at
21 1:30 for that. And if you're so inclined to be here
22 again this evening, it's 7:00, I think, tonight is
23 another meeting just like this. The same information
24 will be presented, for the benefit of those who couldn't
25 attend today. Thank you.

1 MR. WALDROUP: Just a clarification. We
2 retained transportation, limited mass transportation, a
3 small bus for those that want to ride over, instead of
4 convening at the site, you may park your vehicles and
5 ride over, and the invitation is open.

6 VOICE: Will we be meeting below the dam
7 at the old canoe store or up on top?

8 MR. TANT: Up on top.

9 MR. PALMER: And we're going to start at
10 the visitors center, and then we may go out to those
11 places but we want to start the site visit at the
12 visitors center, so that we're all at one place.

13 VOICE: All right. During the field
14 visit, is there any more information that will be
15 presented other than just "this is the site and these are
16 the areas we are proposing to put the turbines"?

17 MR. PALMER: No, it's part of the FERC
18 process that, you know, we need to provide full access to
19 the site. But honestly, there's nothing else to say.
20 But you're welcome to ask questions if something strikes
21 you while you're out there. We'll be there to answer
22 questions to the best of our ability.

23 MR. TANT: Are there folks that are
24 interested in meeting here and taking the transportation
25 over, if you're going? Because I guess if there's not,

1 it would be helpful to know that we don't have that need.

2 MR. PALMER: We can release our bus
3 driver.

4 MR. WALDROUP: But certainly, if you want
5 to decide over lunch, where we'd be leaving here - when
6 are we supposed to be at the site?

7 MR. PALMER: 1:30.

8 MR. WALDROUP: So we'll probably be
9 leaving here at 1:10 or so, 1:10, 1:15 so we can meet
10 here at 1:00 if you want to ride over on our bus.
11 Otherwise, we will meet you at the visitors center at
12 1:30.

13 MR. TANT: Thank you.

14 [MEETING CONCLUDED AT 11:25 A.M.]

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1 STATE OF NORTH CAROLINA

2 COUNTY OF WAKE

3
4 C E R T I F I C A T E

5
6 I, Bryan Collins, notary public/court reporter, do
7 hereby certify that this hearing was taken and
8 transcribed under my supervision; that any and all
9 witnesses were sworn or affirmed prior to their
10 testimony; and that the foregoing pages, inclusive,
11 constitute a true and accurate transcription of the
12 hearing.

13 I do further certify that the persons were present
14 as stated in the caption.

15 I do further certify that I am not of counsel for or
16 in the employment of either of the parties to this
17 action, nor am I interested in the results of this
18 action.

19
20 This is the 6th day of February, 2012.

21
22
23 _____
24 Notary Public #200817700146
25